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AN

# INTRODUCTORY DISCOURSE,

ON THE

## STUDIES REQUIRED

FOR

# THE MEDICAL PROFESSION.

ADDRESSED TO THE

STUDENTS OF THE MEDICAL SCHOOL

OF

ST. GEORGE'S HOSPITAL,

OCTOBER 1, 1838.

BY SIR BENJAMIN C. BRODIE, BART., F.R.S.

SERJEANT-SURGEON TO THE QUEEN, AND SURGEON TO  
ST. GEORGE'S HOSPITAL.

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LONDON:

PRINTED BY T. BRETTELL, RUPERT STREET, HAYMARKET.

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## ADVERTISEMENT.

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The following Discourse was delivered in compliance with the wishes of the Lecturers in the Medical School of St. George's Hospital.

Those who did me the honor of being present on that occasion will find that I have ventured to introduce a few additional observations relating to the application of remedies. In other respects, I believe that there is no essential difference between the Discourse as it is now in print, and as it was orally delivered.

B. C. BRODIE.

14, SAVILLE Row,

*November 7, 1838.*





## INTRODUCTORY DISCOURSE,

&c.



GENTLEMEN,

THERE are very few departments of human knowledge which may not be cultivated, with more or less advantage, by those who are engaged in the pursuit of the medical profession. The phænomena of muscular action cannot be comprehended by one who has paid no attention to the study of mechanics. Without some acquaintance with the phænomena and laws of light, you will in vain endeavour to understand the physiology of the eye, and the treatment of its diseases. The classification of the various textures of the body ; the changes produced in the animal fluids by respiration and secretion ; the composition and exhibition of medicines ;—these things must be altogether mysteries to those who have not applied themselves to chemistry. I cannot believe that any one is really qualified to undertake the management of cases of mania and imbecility of mind, who has not studied

the mind in its natural and healthy state, and endeavoured to analyse his own intellectual and moral faculties. The stores of medical experience accumulated in former ages, and even the comparatively modern works of the great Haller, replete as they are with the most interesting physiological information, are of little avail to those who have no knowledge of the dead languages.

It is not however my intention, in this introductory discourse, to enlarge upon these topics. There are some studies peculiar to the medical profession to which, if you would do justice to the public, and obtain honour for yourselves, you must be especially devoted: which you must prosecute, not carelessly, and as a matter of form, but with zeal and unremitting diligence, through the whole period of what is called your education; and some of them also during the remainder of your professional lives. It is to the method of conducting these important studies that I am now anxious to direct your attention. My object is, in the beginning of your professional career, to place you in the right road; and I trust that the observations which I have to offer, founded as they are on experience, and on an earnest desire for your welfare, may not be unacceptable at the present time, nor be found altogether useless in the future.

In the practice of our art we undertake the cure of disease; and, in saying that we are to use our best endeavours, honestly and conscientiously, for the

attainment of this object, we describe the entire duties of a medical practitioner. But for the cure of disease it is not sufficient that we should understand the nature and application of remedies; we must study disease itself, in all the variety of forms under which it may present itself to our notice. And this leads us to another order of inquiries. Disease is the derangement of one or more of the animal functions, in many instances attended with an alteration in the structure of the body; and, if you would understand these subjects, you must first make yourselves acquainted with the structure and functions of the body in its healthy state. Thus you will perceive what are the three principal divisions of the course of education in which you are now engaged. The first comprehends the science of Anatomy and Physiology; the second that of Pathology, or the science of disease; and in the third division we find whatever relates to Medical and Surgical Treatment.

Let it always be borne in mind that this last is the real object which you have in view. I address you as future medical practitioners. If, taking another course, you choose to study Anatomy and Physiology, merely as interesting branches of human knowledge, you are at liberty to do so, and you will be as well rewarded for your labours as if you had applied yourselves to Geology, Optics, or Astronomy. In like manner, if any one apply himself, as a Philosopher, altogether to the study of



Pathology, he will find much in it that may interest himself, and that may be useful afterwards to those who carry their researches further. But as medical practitioners, you must not stop at either one or the other of these points; and, never losing sight of the ultimate object of all your investigations, you must estimate the value of whatever other knowledge you acquire by the degree in which you find it to be directly or indirectly applicable to the healing art.

It is one advantage arising from the peculiar constitution of the London medical schools, that, with few exceptions, the instructions, which you here receive, have, in a greater or less degree, a tendency to practice. The ambition of the teacher of Anatomy is not limited to success in his present vocation. He looks forward to the time when his profession as a Physician or Surgeon will elevate him to fame and fortune. His mind is naturally directed to those inquiries, a proficiency in which will most assist him in the attainment of these objects; and that which is useful to himself cannot fail to be useful to his pupils. I have no doubt that the praises which are bestowed on some of the continental anatomists are well founded: that there are universities in which the anatomical professors, devoting their whole time, and industry, and intellect, to this one pursuit, explain the mysteries of minute anatomy at greater length, and with more precision, than the teachers here: but, nevertheless, I assert



that ours is the better method with a view to the education of those who wish to become, not mere philosophers, but skilful and useful practitioners.

In like manner, Pathology is not taught here as a separate science, but you receive your instructions in it from the Lecturers on the practice of physic and surgery, who, while they explain the changes of function or structure, which constitute disease, point out also the symptoms by which the existence of these changes is indicated in the living body, and the means to be employed for the patients' relief. Thus while you are taught Pathology, you are taught also its uses and application; and these different subjects, brought under your view at the same time, serve mutually to elucidate each other; for, while Pathology assists you in obtaining a knowledge of symptoms, the study of symptoms, and of the operation of remedies, contributes in no small degree to extend your knowledge of Pathology.

The education of a medical practitioner, for whatever department of the profession he may be designed, necessarily embraces a variety of subjects. But it is extended over a space of at least three years, and it is of great importance that you should so arrange your studies that no excessive and overpowering demand may be made on your attention at any one period. And here let me advise you to begin with a system of steady application, and to adhere to it throughout. It is not uncommon for medical students, any more than it is for other

students, to engage at first with zeal in their pursuits ; then, as these lose the charm of novelty, to become careless and indifferent, and at last, when their education is drawing to a close, and it becomes a question how far they are qualified to undergo the required examinations, to endeavour to make up for the time which has been mis-spent and wasted by excessive labour, such as is incompatible with sufficient physical repose and mental relaxation. But it is not in this way that great things are to be accomplished either in our profession, or in any other. Habits of attention which are once lost are not easily regained ; and no durable impressions are made upon a mind which is exercised beyond its powers. The slow but persevering tortoise reached the goal before the hare, who was over-confident of the speed which she could exercise if she were required to do so ; and this fable, which we were taught in the nursery, conveys a moral lesson which the philosopher need not be ashamed to learn.

The studies which will occupy the principal part of your time are those of Anatomy, and of the Hospital practice ; and you cannot doubt as to which of these has the claim of precedence. I will not say that a student who attends the wards of the hospital in the beginning of his education, may not thence obtain some sort of useful practical knowledge ; but it is plain that he can profit little by it compared with one whose mind has been prepared by a previous diligent attendance on the anatomical lectures

and dissecting-room. The attendance on anatomical lectures is necessary for your initiation into the study of Anatomy. They give you a general view of what you have to learn, and are, at the same time, the source whence you will derive your principal instructions in Physiology. For Anatomy and Physiology are one science, and to teach them separately is about as absurd, as it would be to divide Astronomy into two sciences, the one teaching the figure and size of the heavenly bodies, and the other their motions. But to be a good anatomist, the student must labour in the dissecting-room: he must unravel the structures of the human body with his own hands, and examine every thing for himself. The impressions which dissection leaves upon his mind not only are accurate, but they will be lasting; if he trusts to those which he receives from the discourses and exhibitions in the Lecture-room, he will find them to be evanescent.

Such is the connection of the different parts of the animal system, and so dependent are they on each other, that it would be hazardous to regard the knowledge of any one of them as altogether useless. But there are some parts of which a general knowledge is all that is required. It would be an unprofitable waste of time to trace all the artificial divisions which may be made of the deep-seated muscles of the spine, or the varieties which occur in the minute ramifications of the veins and arteries. On the other hand, there are some parts, such as the bones and

muscles of the extremities, the distribution of the principal nerves and larger vessels, the structure of the viscera, which cannot be too sedulously and minutely studied; and no one is fitted to undertake the practice of operative Surgery, who is not familiar with the exact relative situation of the parts concerned in surgical operations.

During the first season of your education, you will find that the labour of acquiring a competent knowledge of Anatomy is such that you will have but little time to bestow on other studies. The few among you who have the opportunity of remaining in the schools during a period of five or six years may do well to devote even two entire winters to Anatomy before they begin their attendance on the hospital practice. But I cannot give this advice to the majority of those whom I now address, and whose period of education is more limited. And here let me observe, that it is a great mistake to suppose, after the first anatomical session is over, that it is better for you to defer beginning your attendance on the hospital until the next autumn. You will, in fact, attend the hospital to greater advantage during the summer than at any other time. The same opportunities of experience present themselves at the hospital at one period as at another, and during the summer you can bestow a more undivided attention on what there occurs than you can during the winter.

While engaged in attendance on the hospital, always bear in mind that there is no one of your other



studies which, as to real importance, can compete with this. The Lectures on Anatomy, Chemistry, Materia Medica, Practice of Medicine and Surgery, and Midwifery, are nothing in themselves. They are but the means to an end, and are valuable only because without them you would be unable to learn the symptoms and treatment of diseases in the hospital. I feel it my duty to make this observation, and to make it earnestly, because it appears to me that the truth which it inculcates is not, for the most part, sufficiently impressed on the minds of medical students. Perhaps, however, if strict justice were done to all concerned, and we were to trace this mistake to its origin, we should find that it belongs, not so much to the medical students themselves, as to those by whom their course of education is regulated, and who, by a false estimate of the importance of lectures, and an unnecessary multiplication of the number of them which the students are required to attend, have left an altogether insufficient time for a profitable attendance on the hospital.

Indeed it is not by going through the form of walking round the wards daily with the Physician and Surgeon that you will be enabled to avail yourselves of the opportunities of obtaining knowledge which the hospital affords. You should investigate cases for yourselves; you should converse on them with each other; you should take written notes of them in the morning, which you may transcribe in the evening; and in doing so you should make even

what are regarded as the more trifling cases the subject of reflection. Some individuals are more, and others are less, endowed by nature with the power of reflection; but there are none in whom this faculty may not be improved by exercise, and whoever neglects it is unfitted for the medical profession.

You will at once be sensible of the great advantage arising from your written notes of cases. But that advantage is not limited to the period of your education. Hereafter, when these faithful records of your experience have accumulated, you will find them to be an important help in your practice; when years have rolled over you, and the multitude of intervening events has obscured the once bright inscriptions on your memory.

Feeling as I do how essential it is, both to yourselves and to the public, that your hospital studies should be well conducted, I shall proceed to offer some further observations on this subject.

In the first instance, your attention should be directed more to the symptoms and progress of diseases than to their treatment. You should begin with those of the simplest form, as the only means of obtaining that elementary knowledge, without which you will in vain endeavour to comprehend the more complicated and difficult cases. Carrying with you into the wards of the hospital the knowledge which you have acquired in the dissecting-room, you will, in each individual case, make these inquiries:—What is the nature of the disease, con-

sidering it anatomically and physiologically, and in what organ is it situated, or has it no distinct locality? If these points can be satisfactorily determined, you will, in most instances at least, have discovered the bond of connection between the various symptoms; your subsequent investigation of the case will be rendered more simple; and you will be enabled to form a more distinct and rational notion as to the treatment which is required, and the probability of a cure, than you could have formed otherwise. Do not be satisfied with having learned the structure and functions of the body in health, but attend the examination of those who have died of their complaints; and endeavour to associate the symptoms which existed before death with the morbid appearances observed afterwards. The more extended cultivation of morbid anatomy is one of the most peculiar features of modern times. It has laid the foundation of a more accurate system of pathology than that which existed formerly, and has led to many improvements in practice; and it is right that your minds should be impressed with a just sense of its great value and importance.

Having said thus much, I trust that I shall not be considered as under-estimating these researches in the observations which follow. Morbid anatomy is not pathology, though it is an essential part of it. You may know all that is to be known of the former, and yet your knowledge of the latter may be very limited. To be a pathologist you must



study disease in the living body, even more than in the dead. Even in the instance of what we call local diseases, morbid anatomy does not teach us all that we ought to know; but there are many diseases which, as far as we can see, have no absolute locality; and what does it teach us there? In cases of hysteria, gout, fever, and in a number of others which it would be easy to enumerate, the dissection of the dead body furnishes us with little else than negative information; and in some cases, if we trust implicitly to it, morbid anatomy will prove a deceitful guide. Thus, in a patient who has died of continued fever, you find the mucous membrane and glands of the lower portion of the small intestine ulcerated. Your first impression might be that you had discovered the original malady of which the fever was symptomatic. It is only by the investigation of the disease in the living person that you are enabled to satisfy yourselves that the ulcers were the consequence, and not the cause, of the fever. The mere morbid anatomist may suppose that in the inflammation of the œsophagus and trachea, he has discovered the essence and real seat of hydrophobia; but a more extended observation teaches you that such inflammation is but a contingency; and that whether it exist in a greater or less degree, there will be the same fatal termination of the patient's sufferings. Then there is an extensive class of diseases in which we may say that there is actually no danger; and of these morbid anatomy

can teach us nothing, although we may learn much respecting them, so as to understand their nature sufficiently well, by investigating them in other ways. We know as much of a sick headach as of pulmonary consumption; as much of psoriasis and lepra, as of small-pox and measles.

If you were to trust implicitly to what is taught in books and lectures, you would suppose that you must understand the nature of every case that you meet with, and be able to give it its appropriate appellation. But a very little experience in the hospital will teach you that it is not so in reality. No fault is to be attributed to authors and lecturers; for if they were to attempt to teach the science otherwise, they could not teach it at all. But you must take care that you are not misled, and be prepared to meet with cases of which the nature is doubtful, and even with some which are absolutely unintelligible. Never allow your imagination on these occasions to supply the place of knowledge. It is something to be aware of our own ignorance, which time and observation and reflection may remove, but which is likely to be permanent if we think it necessary to offer a hypotheticalal explanation of every case which we do not, in the first instance, comprehend.

Although, as I have already observed, the symptoms and progress of diseases claim your first attention, yet you will soon discover that these cannot, in practice, be separated altogether from the study of the means to be employed for their

relief; and you must, at an early period of your attendance at the hospital, endeavour to form some notion of the principles on which the latter is to be conducted.

The first question, then, which should present itself to you in the management of a particular case is this:—Is the disease one of which the patient may recover, or is it not? There are, indeed, too many cases in which the patient's condition is so manifestly hopeless, that it is impossible for you to overlook it. Let me, however, caution you that you do not, in any instance, arrive too hastily at this conclusion. Our knowledge is not so absolute and certain as to prevent even well-informed persons being occasionally mistaken on this point. This is true, especially with respect to the affections of internal organs. Individuals have been restored to health who were supposed to be dying of disease in the lungs or mesenteric glands. But it is also true, though to a less extent, with respect to diseases of parts which are situated externally. I know females who are now alive and well, who were supposed to labour under malignant disease of the uterus; and I could mention many cases in which patients have recovered of what had been regarded as an incurable disease of a joint. It is a good rule in the practice of our art, as in the common affairs of life, for us to look on the favourable side of the question, as far as we can, consistently with reason, do so.

A sanguine mind tempered by a good judgment is the best for a medical practitioner. Those who from physical causes or habit are of a desponding character will sometimes abandon a patient to a speedy death, whom another would have preserved altogether, or for a considerable time.

There is another inquiry which should be always made before you determine on the adoption of a particular method of treatment. What will happen in this case, if no remedies whatever be employed? If the patient be left altogether to Nature, or to the efforts of his own constitution? There are many diseases, which, for the most part, undergo a spontaneous cure, and we should be always very cautious how, in such cases, we disturb the natural process. A prudent Physician watches a case of measles or small-pox, but it is only on some special occasions that he ventures to have recourse to any active remedies. The Surgeon ought to be influenced by similar views in the management of the cases which come under his care; those, especially, in which the patient suffers from the effects of mechanical injury. The animal system is not like a clock or a steam engine, which, being broken, you must send to the clock-maker or engineer to mend it; and which cannot be repaired otherwise. The living machine, unlike the works of human invention, has the power of repairing itself; it contains within itself its own engineer, who, for

the most part, requires no more than some very slight assistance at our hands. We bring the edges of a wound into contact, but the vascular union, which constitutes the healing by the first intention, is the work of a higher art than any that we profess to practise. If this mode of union fails, and the wound is to be healed by granulations, still this is not accomplished by our means. So, where there is a simple fracture, all that we can do is to place the two ends of the bones in a proper position, and keep them in it. The process by which they are made to unite, so as to be again consolidated into one bone, is not under our dominion and control. These are, it is true, examples of slighter and simpler injury; but even in those in which the injury is more severe and complicated it is easy for us to interfere to the patient's disadvantage, and, in fact, it may be truly said, that there is, on the whole, more harm done by too much than there is by too little interference. A patient with a compound fracture of the leg, or a wound of the knee-joint, stands a comparatively bad chance of recovery, if the Surgeon, in his daily visits, disturbs the position of the limb, introducing his probe into the wounds and sinuses, and dressing them to the bottom with lint. Wounds of the brain are, as you must already know, highly dangerous, so that there is only a small proportion of recoveries among a great number



of deaths from these accidents. I was once at the trouble of looking over all the cases of this kind which I could find recorded among my own manuscript notes, and in what might be regarded as standard books belonging to this part of Surgery. I constructed a table, which represented, in every case, the kind of wound, the treatment employed by the Surgeon as far as Operations were concerned, and the results which followed; and it was curious to observe how large a proportion of the recoveries occurred in those cases in which the Surgeon either avoided an operation altogether, or confined himself to the removal of some loose and detached pieces of bone. You may well suppose that a person who has a musket-ball lodged in the brain is in a very dangerous condition; nevertheless, it appears that it is safer to allow it to remain, than to endeavour to extract it.

I feel it my duty to give you these cautions. I should, however, be sorry if, in so doing, I were to lead you to over-estimate what Nature can do, or to under-estimate the resources of our art. No one will probably be bold enough to tell you that Surgery is useless; and none but the ignorant will hold this language respecting the sister art of medicine. You will not have been engaged for two months in visiting the bedsides of the patients in the hospital, without having

ample means of contradicting this absurdity. I said that it is easy to interfere too much in the management of a case of compound fracture: yet the life of a man who has met with such an accident has been frequently preserved by the Surgeon seizing a fit opportunity to open a putrid abscess. I said that a prudent Physician, called to a case of measles, will do little more than watch the progress of the disease where it proceeds favourably; but if symptoms of pneumonia shew themselves, and blood-letting is not resorted to at a proper period, the death of the patient may be the consequence of such neglect. When I tell you that we are to trust to Nature, I do not mean to say that we are to confide in her implicitly, but that our rule should be not to disturb her operations without an adequate reason for so doing; at the same time holding ourselves ready, where a just occasion presents itself, to step in to her assistance, and then act with promptness and decision.

You will soon learn that it is not equally easy, in all cases, to determine what is the mode of treatment most calculated to be useful to the patient. The disease may be simple and obvious, so that no doubt can be entertained respecting it; and we know if any remedies, which we possess, are capable of relieving it; and what they are: and, if it be not under the influence of remedies, we



know that also. But in another case, the disease may be complicated, the complication being, most usually, of this kind ; that, that which most attracts our notice is not the primary disease :—but it is against this last, and not against the diseases that follow in its train, that our remedies are to be directed. Bearing this rule in your minds, you will understand many things that occur in the hospital, which you could not have understood otherwise. A patient, for example, has his legs swollen from anasarca ; the skin tense, inflamed, and likely to give way and ulcerate, or even threatened with gangrene. We make punctures with a needle: the fluid escapes, the tension is relieved, the inflammation subsides. But the relief is only temporary. The swelling depends on an obstruction to the return of the venous blood from the limb, produced by disease elsewhere, probably at a considerable distance from the part to which our attention has been principally directed. To prevent a recurrence of the mischief in the legs, we must endeavour to remove, or, if that cannot be accomplished, to palliate, the original disease. Another patient suffers from inflammation of the synovial membrane, which lines the knee. The joint is painful, and distended with fluid. Perhaps we are told a history of some sprain ; but on inquiry it is evident that the accident was so slight, that it will not account for the symptoms. We have recourse to leeches, blisters, and liniments,

and keep the limb in a state of repose: but although somewhat mitigated, the inflammation still lingers in the joint. In fact, we have not yet traced the disease to its origin. On further inquiry we find that there is a faulty digestion, with flatulence and acidity of the stomach after meals, and a copious secretion of lithate of ammonia by the kidneys. In addition to our other remedies, we administer magnesia, small doses of mercury, and perhaps colchicum, and the disease subsides.

Again, a case, whether simple or complicated, may be obscure; so that we cannot well satisfy ourselves what the symptoms indicate, or how they are linked together. Here we can do nothing better than consider what are, on the whole, the most reasonable explanations, which can be offered of the circumstances of it; and without adopting these explanations as realities, our practice must be a series of experiments founded on them. If our first experiment should not succeed, in our second or third we may be more fortunate; and in the meantime, every one of them probably gives us a clearer insight into the disease, so that we may proceed with more confidence in our treatment of it.

But let us suppose another case. A disease is so obscure, or so beset with difficulties, that we are absolutely at a loss how to treat it, having nothing to direct us in our practice. Here we may apply a

rule, which is also applicable to all the concerns of life. When we know not what to do, it is better that we should do nothing. Nature may accomplish something for the patient; and if our efforts to assist her are founded on no principle, they are more likely to be mischievous than they are to be useful.

It is almost proverbial among us, and I have already expressed the same thing, though in other words, that our object should be to seek remedies for the disease, and not for the symptoms. But there are few general rules which are not to be received with some degree of limitation. Particular symptoms may be so urgent, that we must endeavour to relieve them at all events, without reference to the causes which produce them. You must, under certain circumstances, puncture anasarcaous legs, although this does nothing for the primary disease. The pain of the *tic douloureux* is merely a symptom, probably indicating the existence of some kind of disease in the brain: but if the patient be distracted by excessive suffering, are we not to administer opium for his relief? A Physician is called to a patient with a weak and fluttering pulse and cold extremities, who is, to use common language, in danger of sinking. He does not hesitate for one instant, to give him ammonia and brandy, without waiting to inquire about the original malady. If the *post-mortem* examination should after-

wards disclose that some internal inflammation had been going on at the same time, there is nothing for him to regret ; a knowledge of that circumstance, would not have altered his practice in such an emergency as this.

So far the rules of practice seem to be sufficiently intelligible. But the great difficulty remains to be noticed :—How are you to determine what are remedies, and what are not, and the real value of the remedies which you possess ? Here is the most abundant source of the errors which infest our art ; from which even the most experienced and discerning practitioners are not altogether exempt ; but which especially prevail among those who are deficient in experience or good sense. It is to the almost entire ignorance of the public, and especially of the aristocratic classes, as to the evidence which is necessary to establish the efficacy or inefficacy of a particular mode of treatment, that we are to attribute the reputation which is frequently obtained by empirics and other adventurers, who pretend to practise the art, without having learned the science, of medicine.

When the optician, in constructing an optical instrument, arranges his lenses and reflectors in a new order, his knowledge of the principles of optics enables him to predict the effect which will be produced, so that, except as to some minor circumstances, he can be scarcely said to

be making an experiment. But there is no reason to believe that in the study of those varied and complicated phænomena, which are the subject of Physiology and Pathology, we shall ever arrive at that point which has been long since attained in Optics, and some other branches of Natural Philosophy; and at all events, we are far distant from it at the present moment. Few greater benefits have been conferred on mankind than that, for which we are indebted to Ambrose Parey—the application of a ligature to a bleeding artery: but no knowledge which he possessed would have enabled him to say more than that it would be probably successful; and it was left for after-ages to demonstrate the principle on which it acts, and to explain the circumstances which may cause its failure. John Hunter, as you will hereafter learn, was led by his knowledge of the animal economy to propose a new method of treating aneurysm; and it is impossible to estimate the number of lives which have been preserved by this discovery; yet it was but an experiment, of which even his philosophic mind could not, with certainty, predict the result. It must, however, be admitted that science pointed out the road to these inventions. But this cannot be said of the great majority of the remedies which you will see employed. Nothing that could be known beforehand would lead you to expect that Ipecacuanha would



operate as an emetic ; or that Opium would occasion sleep ; that Quinine or Arsenic would cure the ague ; that inflammation of the Iris would yield to Mercury ; or the gout to Colchicum. The invention of these, and of a multitude of other remedies, is of accidental origin ; we are indebted for our knowledge of them, for the most part, to the observations of ignorant persons, accumulated during a long series of ages ; and the office of men of science is little else than to study their effects minutely, and to learn the right application of them. But even in doing this, the greatest caution and, I may say, scepticism is necessary to prevent you being continually guilty of mistakes. I have already told you how many diseases, if left to themselves, admit of a spontaneous cure. We see the surface of the body, and we know by certain outward signs a good deal of what takes place within ; but there is much of which we know nothing, so that it is impossible for us to take cognizance of all the circumstances which may occur to modify the course, and alter the termination, of a disease. If we trust implicitly to the instinct which inclines us to believe that when one event follows another, the first is the cause, and the second the effect, we shall be frequently directed wrong. The fact of a patient having recovered under a particular mode of treatment, goes but a little way towards establishing its value ; nor

is anything sufficient for this purpose, short of the same result being obtained in many similar cases, in which there was otherwise little prospect of recovery. It is the disposition of every one of us to admit the efficacy of the remedies which we employ on insufficient evidence; and unless we, whose duty it is to understand these subjects, are on our guard against this not unnatural prejudice, we have little right to blame the credulity of those whose minds are not turned to these inquiries, when a corresponding error of judgment leads them to believe in the absurdities of metallic tractors, animal magnetism, and homœopathy!

But there are still further considerations, which must not be overlooked in this part of our inquiry. It is not enough that you should have satisfied yourselves, by your own observations, or by those of others, as to the efficacy of a particular remedy in a particular disease: you must look further still; endeavouring to learn what such a remedy may do besides. That which is usually an agent for good, may, under certain circumstances, be an agent for evil also; and as the habits and constitutions of individuals differ, so it is not always in your power to foresee which influence will predominate. Each individual case must be separately and carefully studied, while under treatment, and with a view to its treatment, as much as with a view to a true diagnosis in the first instance. Arsenic is a remedy for *lepra*. Most persons can take it in the doses



necessary for the cure of that disease, without experiencing the smallest inconvenience from it: but, in some, a very moderate dose will operate as a poison. Here, by watching its effects, you will always be enabled to discontinue it in time to prevent any ill consequences arising from it; and the fact of it disagreeing with one person, does not therefore prevent you giving it to another. But in other cases, the circumstance of a method of treatment which is generally useful, being occasionally injurious, is a sufficient reason for you to lay it aside altogether. A late eminent Surgeon proposed the ligature of the principal vein on the inside of the leg, as a remedy for varicose veins and ulcers of the limb. For some time the operation seemed to be attended with the best results; but ultimately it was ascertained that inflammation of the membrane lining the vein occasionally followed. Such inflammation, when once established, is often uncontrollable, and always highly dangerous; and the possibility of its occurrence is more than sufficient to counterbalance all that can be said in favour of the operation.

I fear that, in my anxiety to give a right direction to those studies, which, as I believe, constitute the most important part of your education, I am already beginning to exceed the brief limits of a lecture. There is, however, one other subject which will not detain you long, and on which, before we part, I feel it my duty to offer a few remarks.

As medical students, you have little leisure for reading ; you must, however, be provided with some good systems of Anatomy and Physiology to assist you in the dissecting-room ; and you will find some of the best modern compilations relating to Medicine and Surgery useful when you begin your attendance on the hospital. There are some few books which you ought carefully to peruse. I leave it to the different lecturers to point out what they should be ; but I shall take upon myself to mention as one of them the Treatise of John Hunter on the Blood and Inflammation. It is true that the essential parts of John Hunter's doctrines as to inflammation and its consequences are now so incorporated with what is taught in the schools, that to be acquainted with them you need not seek them in his works : but I recommend you, nevertheless, to make these your especial study, for the sake of the other valuable information which they contain, and the important views in Physiology and Pathology which, in almost every page, are offered to your contemplation ; and also for this reason, that they will improve your faculty of observation, and furnish you with materials for reflection during the remainder of your lives.

During the latter period of your attendance on the hospital, and afterwards, when first engaged in practice, you should be provided with what may be regarded as the standard works on Pathology, Me-

dicine, and Surgery. Not that I mean much to recommend a course of medical reading, which for practical purposes is nearly useless. Books should be had recourse to chiefly for the purpose of reference, when circumstances have brought a particular subject under your observation. And here I must advise you not to confine yourselves within the narrow bounds of modern publications ; an error which is, I fear, too common, at present, not only with medical students, but with practitioners. It is true, that within the last fifty years a vast impulse has been given to our sciences ; but it is equally true that they were cultivated not unsuccessfully before. There is no richer mine of surgical knowledge than that which is contained in the memoirs of the French Academy of Surgery ; and, as far as I know, there are no descriptions of disease more accurate and graphic than those which have been bequeathed to us by Sydenham.

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Gentlemen ! Although many years have since elapsed, it seems to me but as yesterday, when I was, as you are now, a young adventurer in this great Metropolis ; and I well remember how often, in the intervals of my occupations, I have contemplated, with something like dismay, the prospect which lay before me. My own feelings, at that time,

explain to me what may possibly be yours at the present period. Yet you have undertaken nothing which energy and perseverance, and upright and honourable conduct, will not enable you to accomplish. It cannot, indeed, be predicated of any individual to what exact extent he may attain professional success, for that must depend partly on his physical powers, partly on the situation in which he is placed, and on other contingencies : but having had no small experience in the history of those who have been medical students, I venture to assert that no one who uses the means proper for the purpose, will fail to succeed sufficiently to gratify a reasonable ambition. You have entered on pursuits of the highest interest, in which you will have the no small satisfaction of knowing that you never acquire any real advantage for yourselves which is not the consequence of your having benefited others. It is true that you have years of constant exertion before you ; but you will eventually learn how preferable such a situation is to that of those individuals who born to what are called the advantages of fortune, but neglecting the duties of their station, believe that they can direct their minds to no more worthy object than the multiplication of their selfish enjoyments. It will not be your lot, as it is often theirs, to suffer the miseries of eunui, or to be satiated and disappointed with life at an early period ; nor will you have to regret, as you advance in age, that you

have lived unprofitable members of society. It is also true that you will meet with difficulties in your progress ;—but there is no higher gratification than that of surmounting difficulties ; and in the midst of them you will always be cheered by the anticipation of that period when you may look on past events and say to yourselves—

“ *Multa dies variusque labor mutabilis ævi  
Retulit in melius.*”

FINIS.